

REMARKS

Claims 1-18 are pending in this application, with claims 1, 2, 4, 8, 9, 11-13, and 15 being independent. Claims 3, 10, and 14 were previously canceled. For the reasons set forth below, Applicants respectfully submit that all pending claims as currently amended are patentable over the cited prior art.

Claim Rejections – 35 U.S.C. § 102

Claims 1, 2, 4-9, 11-13, and 15-18 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent Application Publication Number 2003/0118192 (“Sasaki”).

Applicants respectfully traverse this rejection for at least the following reasons.

Claim 1 recites an audio information transforming method applied to a video/audio format in which a screen includes a plurality of objects and each object has video information, position information, and audio information. The method includes the steps of setting a virtual listening point at a position different from a basic listening point that is set as a position at which a listener listens to an audio; comparing a positional relationship between the basic listening point and the object with a positional relationship between the virtual listening point and the object; setting a position of a virtual sound source; and changing an allocation ratio of an audio to a plurality of audio outputting means based on a compared result in the comparing step, a position of the virtual listening point and the position of the virtual sound source.

Sasaki does not appear to describe or suggest an audio information transforming method including, among other features, the steps of comparing a positional relationship between the basic listening point and the object with a positional relationship between the virtual listening point and the object and changing an allocation ratio of an audio to a plurality of audio

outputting means based on a compared result in the comparing step, a position of the virtual listening point and the position of the virtual sound source, as recited in claim 1.

Sasaki relates to an acoustic image localization processing device which can localize the acoustic image of a reproduced sound in an arbitrary position. Sasaki at Abstract. Referring to FIG. 1 of Sasaki, the acoustic image localization processing device (1) includes a decoder (3), a synthesis circuit (4), a remote control (5), a screen (6), and speakers (7, 8). Sasaki at pages 2-3, paragraph [30]. The decoder (3) is configured to decode a reproduction signal read by an optical pickup from a DVD disk (2) and to output an image signal (SV), an angle selection signal (SA), and audio signals (C, L, R, SL, SR, and SW). *Id.*

The synthesis circuit (4) is configured to use the angle selection signal (SA) to synthesis the audio signals (C, L, R, SL, SR, and SW) and to output the synthesized audio signals (C', L', R', SL', SR', and SW') for different channels. Sasaki at page 3, paragraph [31]. The remote control (5) is configured to change the angle selection signal (SA). To illustrate, the remote control (5) provides the decoder (3) with an angle selection signal (SA'), specifying the selected angle, in response to the instructions from a listener (9). As a result, the image signal (SV) for the camera angle corresponding to this angle mode is outputted and displayed on the screen (6). Sasaki at page 3, paragraph [39]. Additionally, the synthesis circuit (4) synthesizes audio signals (C, L, R, SL, SR, and SW) according to the selected angle mode and for each channel to produce a sense of localization as if the listener (9) has moved and is facing the sound source. Sasaki at page 4, paragraph [41].

As such, Sasaki appears to describe an audio information transforming method that includes a step of changing an allocation ratio of an audio to a plurality of audio outputting means, however, it does not appear to describe or otherwise suggest an audio information

transforming method that includes a step of changing an allocation ratio of an audio to a plurality of audio outputting means in a manner described by claim 1. In particular, Sasaki does not appear to describe or suggest an audio information transforming method including, among other features, the step of changing an allocation ratio of an audio to a plurality of audio outputting means based on a compared result in the comparing step, a position of the virtual listening point and the position of the virtual sound source, wherein the comparing step includes comparing a positional relationship between the basic listening point and the object with a positional relationship between the virtual listening point and the object, as recited in claim 1.

The Office Action asserts that Sasaki teaches the comparing step of claim 1 on page 2, paragraphs [18, 19] and the changing audio allocation step of claim 1 on page 3, paragraphs [33, 41] and on page 5, paragraphs [70, 71]. Applicants disagree.

On page 2, paragraphs [18, 19], Sasaki teaches that the virtual acoustic image localization processing subjects each synthesized audio signal to acoustic image localization processing based on the head-related transfer function from acoustic image localization positions of the sound sources to both ears of the listener (9), and based on the head-related transfer function from the speakers to both ears of the listener (9). *See also*, Sasaki at page 5, paragraph [66]. Apparently, this enables the listener (9) to hear the sound as if it was reproduced by the virtual speakers from numerous channels. This however, without more, does not describe or suggest comparing a positional relationship between the basic listening point and the object with a positional relationship between the virtual listening point and the object, as suggested by the Office Action.

In particular, the positional relationship described at best are from “acoustic image localization positions of the sound sources to both ears of the listener” and from “the speakers to

both ears of the listener,” and NOT between “the basic listening point and the object [included in a screen and having video information, position information and audio information] and between the virtual listening point and the object. Furthermore, the alleged object in Sasaki appears to be the ears of the listener (9) and not the object included in a screen and having video, audio, and position information, as recited in claim 1. Lastly, the Office Action takes an inconsistent position with respect to recitation of “virtual listening point” in claim 1.

In one section, the Office Action asserts that the “virtual listening point” is created by the listener (9) selecting an angle mode using the remote control (5), and in another section, the Office Action asserts that “create positional between speaker and virtual speaker and sense direction of person denote virtual listening point.” *See e.g.*, Office Action at page 3, lines 10-18. This is an inconsistent application of the prior art to the claim.

Moving forward, paragraphs [33, 41, 70, and 71] of Sasaki do not describe or suggest changing an allocation ratio of an audio to a plurality of audio outputting means based on a compared result in the comparing step, a position of the virtual listening point and the position of the virtual sound source, as recited in claim 1. For example, at paragraph [33] Sasaki describes that the acoustic image localization position of each virtual sound source is calculated and processed according to the angle set, based on relative positional relation between the listening position of the listener (9) and the speakers (7) (emphasis added). As such, any change in allocation ratio of an audio to the speakers (7, 8) is based on relative positional relation between the listening position of the listener (9) and the speakers (7) and not based on a compared result in the comparing step, a position of the virtual listening point and the position of the virtual sound source, as recited in claim 1 (emphasis added).

For at least the foregoing reasons, Applicants respectfully request that the § 102 rejection of claim 1 be withdrawn.

Independent claims 4, 8, 11, 12, and 15 include features similar to the above-recited features of claim 1. Therefore, for at least the reasons presented above with respect to claim 1, Applicants respectfully request that the § 102 rejection of claims 4, 8, 11, 12, and 15 be withdrawn.

Claim 2 recites an audio information transforming method including, among other features, steps of comparing a positional relationship between the basic listening point and the virtual sound source with a positional relationship between the virtual listening point and the virtual sound source and changing an allocation ratio of an audio to a plurality of audio outputting means based on a compared result in the comparing step, a position of the virtual listening point and a position of the virtual sound source. Claim 2 has been rejected by reference to the same sections of Sasaki as in claim 1. Therefore, for at least the reasons presented above with respect to claim 1, Applicants respectfully request that the § 102 rejection of claim 2 be withdrawn.

Independent claims 9 and 13 include features similar to the above-recited features of claim 2. Therefore, for at least the reasons presented above with respect to claim 2, Applicants respectfully request that the § 102 rejection of claims 9 and 13 be withdrawn.

Dependent Claims

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*,

819 F.2d at 1100, 1108 (Fed. Cir. 1987). Because claims 1, 2, 4, 12, 13, and 15 are allowable for the reasons set forth above, it is respectfully submitted that all claims dependent thereon are also allowable. In addition, it is respectfully submitted that the dependent claims are allowable based on their own merits by adding novel and non-obvious features to the combination.

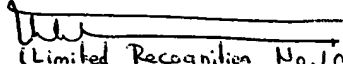
Based on the foregoing, it is respectfully submitted that all pending claims are patentable over the cited prior art. Therefore, it is respectfully requested that the rejections under the § 102 be withdrawn.

Conclusion

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication for which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

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